

# Army Modernization In an Era Of Persistent Conflict

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**T**he Army intends to remain the preeminent landpower on earth, dominant across the full spectrum of operations, now and in the future, to meet our enduring contract with the American people to defend our freedom. The Army's modernization strategy is designed to meet the Army's current and future equipping requirements.

America is locked in a struggle for survival against violent extremists who seek to destroy our way of life. Al Qaeda and similar groups have attacked the United States on our own soil and announced their intentions of establishing a global caliphate based on Shari'a law. The United States is not their only target; they have



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**The Buffalo MPCV**



perpetrated a number of attacks worldwide in pursuit of these aims. They claim grievances that date back to the Crusades in the Middle Ages and the loss of Andalusia (Spain) in 1492. Our enemies take a long view indeed. This enemy views itself in a protracted life-and-death struggle with the West and our ideas of freedom and democracy. We are, whether we like it or not, involved in a long war. Indeed, we see a strategic environment of persistent conflict, a protracted confrontation among state, nonstate and individual actors who will use violence to achieve political and ideological ends.

### **The Army Strategy: Continuous Modernization**

A strategic environment of persistent conflict requires continuous modernization to stay ahead of our enemies whose asymmetric attacks have demonstrated their great adaptive abilities. Continuous modernization will need the best efforts of industry to innovate and speed product deliveries and, in turn, will require the will of the nation to bear the financial burdens these conditions impose for years to come.

Strategies are composed of ends, ways, means and risks. The "end" of our modernization strategy is to sustain the

Army as the dominant landpower in the world, capable of full spectrum operations. There are four points to the Army modernization strategy.

■ **Rapidly field the best new equipment to the current force.** The Army is committed to providing combatant commanders with the capabilities they need to win the nation's wars and to conduct operations across the full spectrum of operations. Current combat operations in Iraq and Afghanistan feature adaptive adversaries bent on defeating us. This fact requires us to maintain our technological advantage through continuous innovation and modernization. We have not stood still. Since 9/11, the Army has fielded 94 new systems for soldiers; we plan to field 64 more over the next 10 years.

Timing is everything in war. As the Army entered the global war on terrorism, the existing processes were too slow to effectively respond to wartime needs. The Army has corrected this deficiency by accelerating wartime acquisition and fielding through several initiatives, including the rapid equipping force and the rapid fielding initiative. These efforts procure commercial off-the-shelf equipment for deploying units. Today, we are institutionalizing these initiatives across the generating force.

Other initiatives include delivering Stryker variants to replace aging ambulances, M113 command vehicles, and nuclear, biological and chemical vehicles throughout the force. In addition, the Army now expedites resource decisions through the Army Requirements and Resourcing Board, which allows commanders in the field to pass their latest requirements directly to the Army Staff for rapid decision and action. We will continue to apply the lessons learned in war to accelerate the delivery of equipment to our soldiers.

■ **Upgrade and modernize existing systems so that all soldiers have the equipment they need.** Army Chief of Staff Gen. George W. Casey Jr. recently stated: "We must continuously modernize our forces to put our Cold War formations and systems behind us and to provide our soldiers a decisive advantage over our enemies." Existing sys-

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tems slated for improvement include the soldier as a system program, the tactical wheeled vehicle fleet, aviation platforms, the Patriot missile system and the existing communications network. In addition, we will upgrade our Abrams tank and Bradley fighting vehicle fleets, providing the two most modern variants of each across the operating force by 2011. These improvements are driven by combatant commander operational requirements, an assessment of our capabilities gaps that account for current and future threats, mission requirements and our enduring commitment to enhance force protection.

We have conducted system upgrades since the early days of the current fight and steadily improved our speed and efficiency in doing this. For example, we have deployed several iterations of improved armor for tactical wheeled vehicles, such as Humvees and trucks, and recently committed to fielding more than 10,000 mine resistant ambush protected vehicles to provide extra force protection for our troops in Iraq and Afghanistan. Our modernization strategy specifically recognizes the physical limits of simply adding more armor protection against an array of increasingly lethal antiarmor threats. We cannot "up-armor our way out" of these challenges, so we seek innovative solutions. That is where the promise of the Future Combat Systems (FCS) offers truly transformational opportunities to protect the force.

■ **Incorporate new technologies derived from FCS research and development.** The FCS program delivers the latest capabilities to the field as soon as they are developed in a process known as spin outs. Several precursors to spin outs, based on FCS research and development, have already been used in combat operations in Iraq and Afghanistan. Examples include: Frag Kit 5 used on up-ar-



mored Humvees; the micro air vehicles, precursors to Class I unmanned aerial vehicles; and various robots that are precursors to the small unmanned ground vehicle.

The Army will test and refine the systems of the FCS program with a dedicated brigade-sized special unit composed predominantly of combat-experienced soldiers of the Army Evaluation Task Force at Fort Bliss, Texas. We will deliver spin-out technologies across the force beginning in fiscal year (FY) 2010. The entire force, not just FCS brigade combat teams (BCTs), will benefit: "Some will get all, all will get some." The impact will be tremendous. To paraphrase Gen. Casey's recent observation, technology gives us "an asymmetric advantage" over our foes.

■ **Field the Future Combat Systems brigade combat teams.** The FCS program is truly revolutionary, not just an incremental improvement to existing capabilities. Future Combat Systems BCTs will far exceed the capabilities of our current brigades. Soldiers in FCS units will be better protected by better and scalable armor, by using unmanned vehicles and unattended sensors to see and destroy the enemy at safe distances, and by using the active protective system to destroy incoming enemy rounds. FCS will save lives as it increases soldier capability and productivity.

One of the transformational aspects of the FCS program is the network. FCS will complement the capacities of unmanned sensors with a capability for soldiers down at the platoon level to see the battlefield as they have never seen it before and to communicate with their comrades in real time.

Today's American teenager is accustomed to using a cell phone to take a picture and send it to friends along with a text message explaining the image. Our soldiers' expectations have been shaped by this background; they

**A Shadow UAV**





expect the same standards when they join the Army. The capabilities available today in the commercial world are made possible by a strong communications infrastructure in America and other technologically advanced nations but not available in many austere environments where the Army fights. FCS will solve this problem by bringing the network to the soldier wherever he or she operates.

The future network will have three layers: land-based, aircraft-based and satellite-based, for a redundant capability that can deploy anywhere in the world. This network will be embedded in FCS manned ground vehicles (MGVs) and extended to the soldier. The MGVs are specifically designed to meet the significantly increased power loads of the network and will be powered by a hybrid electric engine providing a tenfold increase in onboard electrical power.

The network will be distributed to the lowest possible level. The platoon leader in the FCS brigade combat team will have a direct link into the network built into his vehicle and supported by all three layers. This will provide soldiers unparalleled situational awareness on the battlefield.

FCS offers other transformational capabilities. For example, the common chassis of the manned ground vehicle requires fewer spare parts and fewer mechanics to perform maintenance and repairs. A lighter vehicle with an improved hybrid electric engine will yield remarkable fuel efficiencies. These two innovations permit much smaller logistics tails to maintain and resupply the FCS brigade, with fewer convoys that expose our logistics troops to attacks, a leading source of casualties in Iraq. These efficiencies will allow a Future Combat Systems BCT to field twice the number of infantrymen as today's heavy BCTs, allowing for more boots on the ground, a key force multiplier in counterinsurgency, urban, humanitarian, peacekeeping and nation-building operations.

In this sense, FCS is also a window to the future, with machines replacing soldiers in performing many of the most dangerous tasks. This transformational approach portends the development of a stronger and more efficient Army, able to operate effectively across the spectrum of operations. For example, MGVs feature scalable armor that sheds like a snake's skin, allowing new and improved armor to replace older "skins" rather than designing whole new generations of vehicles and thus saving lives, time and money.

The Army will field the first Future Combat Systems brigades in FY 2015, five FCS brigades by FY 2020 and all 15 brigades by FY 2030.



*Infantry carrier vehicle*

## The Means of the Army Modernization Strategy

Congressional funding provides the means to implement the Army modernization strategy. The Army entered the current conflict with an estimated \$52 billion shortfall in its modernization programs. Congressional support since then has helped to make up for some of these shortfalls, and there is emerging strong bipartisan support to fully fund the Army's current and future needs.

The FY 2008 Army base budget provides: \$15.5 billion for rapid fielding of new equipment; \$3.9 billion for upgrading and modernizing existing systems; \$85 million for FCS spin outs; and more than \$3.5 billion for FCS research and procurement. FCS represents 34.0 percent of the Army's overall research, development, test and evaluation budget and 0.4 percent of the procurement budget for FY 2008. The Army will seek to increase the base budget for modernization over current amounts of roughly \$25 billion in the Program Objective Memorandum for FY 2010–15, both to ensure that previous funding shortfalls are corrected and to prevent the loss of funding of critical programs should supplemental funding suddenly start to decline.

## Risks to the Army Modernization Strategy

Foremost among the risks to the modernization strategy would be loss of support by the administration or Congress. Even small decrements to certain program elements can delay fielding of critical capabilities to soldiers in the current fight. For example, the FY 2008 Appropriations Act provided more than \$3.5 billion in FCS funding, but the relatively small \$228 million cut to that program threatens to delay several critical components, including Spin Out 1, by several months. A second major risk is that the high costs of the current fight may cause a withering of support for the Future Force. The nation cannot pit the needs of the current force against the needs of the Future Force. Protecting our soldiers now and in the future is nothing less than a national moral imperative.

We live in an era of persistent conflict that demands continuous modernization to stay ahead of our enemies. Our soldiers must always have the best equipment available; it is a moral imperative, and Americans expect no less. Our modernization strategy will work with full and timely funding but requires the



*Non-line-of-sight mortar*

continued commitment of Congress and the American people to succeed. With that support, the Army will remain the strength of the nation.

